

- 1) Convert the carrier image (of any file-format) from PBC (Pure Binary Code) to CGC (Canonical gray Code) system and in png format.
- 2) Perform the bar chart analysis.
- 3) After that bit-plane analysis is performed.
- 4) Perform size-estimation i.e. calculate the places wherever we are able to store the secret image.
- 5) Perform bit plane quality segmentation on image i.e. implant secret blocks into carrier image.
- 6) After embedding make that image to a different user.
- 7) For extracting the embedded image performs de-steganography that is strictly opposite to steganography.

4.2 LinkGuard Algorithm

LinkGuard works by analyzing the variations between the visual link and therefore the actual link. It additionally calculates the similarities of a URI with a far-famed trusty web site [3].

4.3 Proposed Security Architecture for System and its Workflow

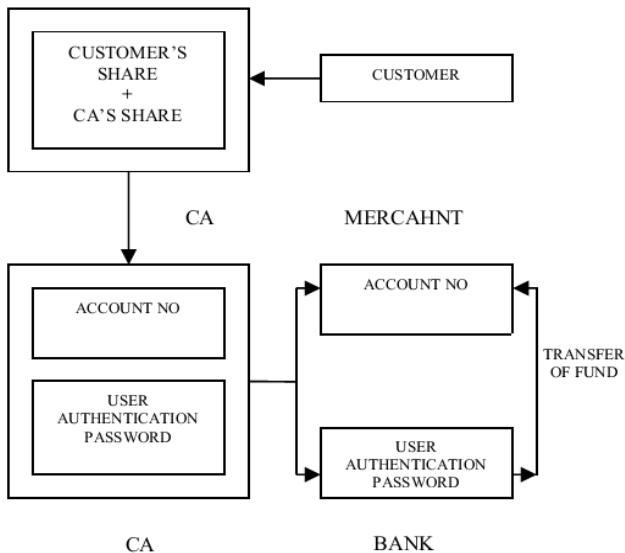


Figure 2: Proposed system Architecture

4.2 Visual Cryptography formula

Visual cryptography may be a sort of cryptography that permits the visual data to be encrypted in such a way that their decipherment are often performed by human sensory system.

- each secret element of the first binary image is born-again into four sub element of 2 share pictures and recovered by straightforward stacking method.
- this can be such as exploitation the logical OR operation between the shares .
- Visual cryptography may be a sort of cryptography that permits the visual data to be encrypted in such a way that their decryption are often performed by human sensory system.
- each secret element of the first binary image is born-again into four sub element of 2 share pictures and recovered by straight forward stacking method. the 2 apparently random pictures will currently be combined exploitation associate

exclusive-or (XOR) to re-create the original image.

4.3 Text primarily based Steganography Methodology

- 1) Projected text primarily based steganography uses characteristics of West Germanic like inflection, mounted order and use of periphrases for activity information instead of mistreatment properties of a sentence.
- 2) Variety assignment methodology is employed to maximize no of letters during a specific allotted variety cluster that successively provides flexibility in word selecting and ultimately leads to appropriate sentence construction.

A. Encoding

- Illustration of every letter secretly message by its equivalent code code.
- Conversion of code code to equivalent eight bit binary variety.
- Division of eight bit binary variety into 2 four bit components.
- selecting of appropriate letters from table one appreciate the four bit components.
- purposeful sentence construction by mistreatment letters obtained because the initial letters of appropriate words.
- coding isn't case sensitive.

TABLE I. NUMBER ASSIGNMENT

Letter	Number assigned	Letter	Number assigned
E	15	M	7
A	14	H	7
R	13	G	6
I	13	B	5
O	12	F	4
T	11	Y	4
N	11	W	3
S	10	K	3
L	10	V	3
C	9	X	2
U	8	Z	2
D	8	J	1
P	7	Q	0

Figure 3: Table with number assignment for Cryptography

B. Decoding

- initial letter in every word of canopy message is taken and depicted by corresponding four bit variety.
- bit binary varieties of combined to get eight bit number.
- code codes ar obtained from eight bit numbers.
- Finally secret message is recovered from code codes.

C. Result

To implement the on top of text primarily based steganography methodology, a secret message is taken into account as "text". Text = 01110100011001010111100001110100

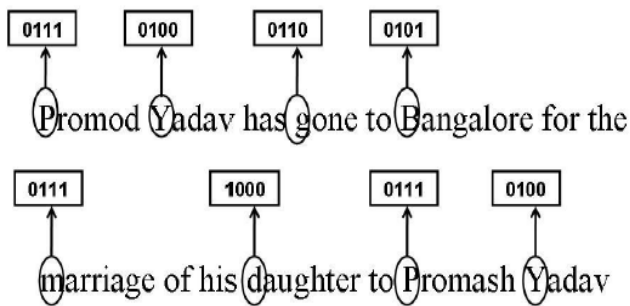


Figure 4: After applying BPCS Steganography

4.4 Visual Cryptography Algorithmic Rule

- Visual cryptography could be a form of cryptography that permits the visual data to be encrypted in such the simplest way that their decryption will be performed by human sensory system.
- each secret constituent of the initial binary image is regenerate into four sub constituent of 2 share pictures and recovered by straightforward stacking method. the 2 apparently random pictures will currently be combined exploitation associate exclusive-or (XOR) to re-create the original image.

Account No - 12345678910111
**Promod Yadav has gone to Bangalore
 for the marriage of his daughter to
 Promash Yadav.**

Figure 5: Snapshot Account Number and Cover Text

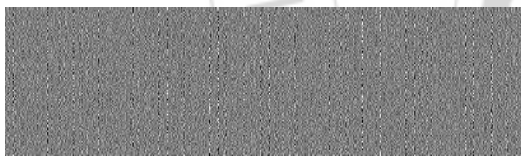


Figure 6: SHARE 1 kept by Customer.

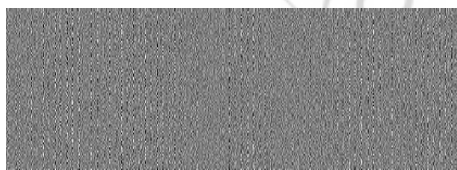


Figure 7: SHARE 1 Kept By Customer

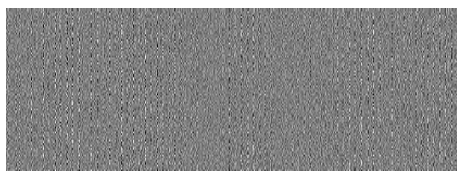


Figure 8: SHARE 2 Kept By Ca

5. Conclusion

In this technique for the protection of on-line payment entryway for E-Commerce, info submitted by the client to the net merchandiser is reduced by providing least info which

will solely verify the payment created by the aforementioned client from its checking account. this is often achieved by the introduction of a central Certified Authority (CA) and by combining BPCS Steganography and 2-out-2 visual cryptography that gives client information privacy and prevents misuse of knowledge at merchant's facet. The BPCS Steganography is basically effective against eavesdropping and features a high info activity capability as compared to ancient Steganography approach the data received by the merchandiser may be within the variety of account range associated with the cardboard used for looking the data can solely validate receipt of payment from authentic client. This technique s solely with hindrance of fraud and client information security. the most aim is client satisfaction and approved merchant-bank interaction for fund dealing. as compared to alternative ebanking application that uses BPCS Steganography and Visual Cryptography ar essentially applied for physical banking, the projected methodology may be applied for E-Commerce with focus space on payment throughout on-line looking similarly as physical banking.

6. Advantages

Advantages of BPCS (Bit-Plane complexness Segmentation) Steganography and Visual Cryptography.

- Proposed methodology minimizes customer's elaborated info sent to the web merchandiser. Thus although a breach takes place in merchant's information, client doesn't get affected.
- Certified Authority acts as a fourth party thereby enhancing customer's satisfaction and security more.
- Usage of BPCS Steganography ensures that the CA doesn't apprehend client authentication watch word so maintaining client privacy. It provides a better level of security and a high info concealment capability.
- Since client knowledge is distributed over three parties, a breach in single information will simply be self-satisfied.
- The 2-out-2 feature of visual cryptography provides effective collaboration of pictures at the Certified Authority's facet.

7. Future Scope

The payment system may also be extended to web or physical banking. Shares might contain client image or signature additionally to client authentication word. within the bank, client submits its own share and client physical signature is valid against the signature obtained by combining client's share and CA's share at the side of validation of customer authentication word. It prevents misuse of taken card and stops illegitimate client. this will be additionally applied for standardization of a selected product or a company by having their personal identification secured.

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